

**Commonwealth of Kentucky**  
**Division for Air Quality**

***COMMENTS AND RESPONSE***

Attachments A-E lists the comments received, the Division's response to each comment, and a detailed explanation of the changes made to the permit. EKPC submitted a response to public comments on February 25, 2010 and those responses are provided in Attachment F.

# ATTACHMENT A- U.S. EPA

**Comments submitted by Greg Worley, Chief, Air Permit Section, U.S. EPA Region IV:**

**Comment 1:**

*“On January 22, 2010, EPA signed into law a new National Ambient Air Quality Standard (NAAQS) for nitrogen dioxide (NO<sub>2</sub>). The new standard is a 1-hour standard set at the level of 100 parts per billion (ppb). The effective date of the new NAAQS will be April 12, 2010. If the final PSD permit for J.K. Smith has not been issued by the time the new NAAQS is effective, the Division will need to include the appropriate air quality analysis before a final PSD permit is issued.”*

**Division’s Response to Comment 1:**

The Division acknowledges the comment. The final PSD permit for J.K. Smith is issued prior to the effective date of the revised National Ambient Air Quality Standard for nitrogen dioxide (NO<sub>2</sub>). Thus, the final PSD permit includes the appropriate air quality analysis for NO<sub>2</sub> at the time of the issuance of the final PSD permit.

**Comment 2:**

*“According to page 4 of the Statement of Basis, the applicant intended to rely on the PM<sub>10</sub> Surrogate Policy to satisfy the applicable PM<sub>2.5</sub> requirements. However, the applicant did not address the appropriateness of the PM<sub>10</sub> Best Available Control Technology (BACT) determination as a substitute for a BACT analysis of PM<sub>2.5</sub>. Additionally, the relevance of the modeling analysis presented by the applicant to the demonstration of the appropriateness of the PM<sub>2.5</sub> Surrogate Policy for PM<sub>2.5</sub> NAAQS compliance purposes is not clearly stated. The modeling analysis was based on the assumption that PM<sub>2.5</sub> emissions were equal to PM<sub>10</sub> emissions for the project as well as all other emission sources included in the NAAQS PM<sub>10</sub> compliance assessment. The maximum modeled 24-hour and annual concentrations based on this conservative assumption were then compared to the PM<sub>2.5</sub> NAAQS of 35 and 15 µg/m<sup>3</sup>, respectively.*

*While the assumption that PM<sub>2.5</sub> emissions equal PM<sub>10</sub> for all the emission sources included in the cumulative modeling appears to be very conservative, the analysis failed to address whether additional background sources of PM<sub>2.5</sub> may have been overlooked. More importantly, the modeling analysis failed to account for the potential contribution of background PM<sub>2.5</sub> to the cumulative analysis by assuming a background concentration of zero. Since we do not know whether the magnitude of conservatism assumed in setting PM<sub>2.5</sub> emissions equal to PM<sub>10</sub> emission would offset the lack of representative ambient background concentrations, this modeling analysis fails to provide an adequate demonstration of the appropriateness of the surrogate policy for this application.*

*Finally, the applicant should either demonstrate that EPA’s PM<sub>10</sub> Surrogate Policy is appropriate for this project and explain the current technical difficulties that make PM<sub>2.5</sub> NAAQS compliance modeling infeasible, or perform a PM<sub>2.5</sub> NAAQS compliance analysis following accepted procedures that include representative ambient background concentrations. To this end, we are in the process of developing guidance for performing an acceptable PM<sub>2.5</sub> analysis which we plan to make available shortly for use by states and PSD permit applicants.”*

**Division's Response to Comment 2:**

The Division acknowledges the comment. Within 10 days of the close of the public comment period, EKPC submitted additional information as provided under 401 KAR 52:100, Section 2(3)(c). The information regarding the use of PM<sub>10</sub> as a reasonable surrogate for PM<sub>2.5</sub> is included in EKPC's response and is listed as "Exhibit 1."

Although Exhibit 1 challenges the legality of EPA's Trimble Order, EKPC also provides an analysis for the use of PM<sub>10</sub> as a reasonable surrogate for PM<sub>2.5</sub>. However, EKPC notes that the significant technical difficulties previously identified by EPA that led to the establishment of EPA's PM<sub>10</sub> Surrogate Policy still exist. Specifically, EKPC lists the unresolved technical issues associated with PM<sub>2.5</sub> quantification methods, limitations in conducting PM<sub>2.5</sub> Air Quality Modeling Analyses, and the lack of promulgated PSD increments for PM<sub>2.5</sub>.

EKPC stated that the BACT for total PM<sub>10</sub> would result in the same BACT determination for PM<sub>2.5</sub>. In their response, EKPC established the "*Predictable Relationship Between PM<sub>2.5</sub> and PM<sub>10</sub>*" and "*BACT Control for PM<sub>10</sub> is also the Best Control for PM<sub>2.5</sub>*"

After reviewing the information submitted by EKPC relating to the reasonableness of using EPA's Surrogate Policy, the Division concludes "that the degree of control of PM<sub>2.5</sub> by the control technology selected in the PM<sub>10</sub> BACT analysis will be at least as effective as the technology that would have been selected if a BACT analysis specific to PM<sub>2.5</sub> had been conducted." *In the Matter of: Louisville Gas and Electric Company*, (Petition No. IV-2008-3) (August 12, 2009). Furthermore, as stated by the Division in response to the LG&E Order, "To date, EPA has not finalized rulemaking to establish increments, Significant Impact Levels (SILs), or Significant Monitoring Concentrations (SMCs) for PM<sub>2.5</sub> analysis. Additionally, EPA has not promulgated an approved regulatory model for PM<sub>2.5</sub>. In absence of these key elements in a PM<sub>2.5</sub> analysis, the use of PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub> is reasonable and appropriate for this permit."

**Comment 3:**

*"Table 5-5 of the Statement of Basis (page 25) discusses the incremental cost effectiveness of using either washed coal or Powder River Basin (PRB) coal, but this analysis seems to have been done after the basic SO<sub>2</sub> controls were already determined as BACT (i.e. FDA). In making the determination of BACT for SO<sub>2</sub> controls from the CFB boiler, the Division should also consider the average (or total) cost effectiveness of a variety of reasonable control combinations (e.g., washed Coal + FDA, PRB Coal + Wet Flue Gas Desulfurization, etc...) before a final determination of BACT is made. For instance, based on the information in the statement of basis, an average cost effectiveness value of \$6,778/ton of SO<sub>2</sub> removed was estimated for the combination of washed coal and FDA. This value was compared to a base case of just a CFB w/LI. This is just a rough estimate and does not take into account any potential decreases in the cost and size of the FDA unit due to a reduced amount of sulfur in the washed coal or changes in control effectiveness of the FDA. EPA recommends that the Division consider more information than just the incremental cost effectiveness of lower sulfur coal options and perform a more detailed analysis before a final determination is made."*

**Division's Response to Comment 3:**

The Division does not concur; however, the Statement of Basis has been revised for clarification. First, the use of cleaner fuel was rejected on the basis that it is a less effective control technology than the control train proposed by EKPC. However, as noted in the Statement of Basis, it is reasonable to consider whether the use of cleaner

fuel and the control train is cost-effective. This necessarily requires an analysis of controlled emissions because it has been already determined that without controls, cleaner fuel should be rejected.

Second, it was not clear how the \$6778/ton of SO<sub>2</sub> removed was calculated. The Division assumes that the amount was calculated as follows:

	Design Coal	Washed Coal
Annual Cost of Coal	\$61,577,325	\$93,556,800
SDA Cost	\$5,232,000	\$5,232,000
Coal + SDA	\$66,809,325	\$98,788,800
Uncontrolled annual SO <sub>2</sub>	98550	21024
Emissions, CFB+LI (85% reduction)	14783	3154
Emissions, CFB+LI+SDA (99% reduction)	986	210
Emissions difference	baseline	14572
Cost/ton removed		\$6,779

In particular, the \$6779 per ton removed amount was calculated as follows:

$$\$98,788,800 / (14783 - 210) \text{ tons removed} = \$6779 \text{ per ton removed.}$$

If this is the case, the method does not reflect average costs as described in the EPA's comment. The above calculation is based upon the difference in emissions, which is an incremental calculation. In this case, the calculation is incremental to the 85 percent reduction inherent in a CFB with limestone injection. The calculation also contains a large error since it attributes the entire amount of \$93,556,800 as a cost of controlling pollution. However, the primary purpose of the coal is to produce electricity. By using the total cost of the coal, the calculation assumes that the entire cost of the fuel is for the purpose of pollution control.

EKPC also made the same error in its response to the same EPA comment. EKPC attributed the entire cost of coal to pollution control which resulted in average costs ranging from \$35,585-\$83,518. However, it is not clear how an average cost, as defined in the NSR manual, can be applied logically in this situation without incorrectly including the portion of the cost of the coal that is used to produce electricity.

The difference in cost between the cleaner fuel and the design coal does reflect the additional cost that can be attributed to a pollution control purpose, i.e., the minimum that EKPC would be required to spend to produce electricity is the cost of the design coal of \$61,577,325. This amount should be subtracted from the cost of cleaner fuels so that the cost for eliminating or removing pollutants does not contain costs that are unrelated to that purpose. However, this is an incremental calculation and does not reflect average costs. It also needs to be matched to the correct "tons of pollutant" removed.

The EPA's method attributes the 85 percent reduction obtained from the inherent efficiencies of the CFB boiler at no cost. This method penalizes advanced coal

technologies if the extra cost of the advanced technology is not reflected<sup>1</sup>. One way to reflect the 85 percent reduction inherent in the CFB would be to consider the total cost of the CFB. However, it would not suffice to take the total cost and divide by the tons of pollutants removed. This calculation would exacerbate the problem of including costs that have no bearing on pollution control, but would include costs that are for the purpose of producing electricity.

An incremental calculation can be used to solve this problem, by comparing total costs of different types of generating units. However, this method would introduce new problems, such as the fact that another type of generating unit may not serve the same business purpose, may not have the capability of using as broad a range of fuel types, may be more or less generating capacity than the original design or may not be capable of phased-construction (i.e., a 600 MW supercritical unit could not be built in phases as the two proposed 300 MW CFBs), and would need to be analyzed from a multi-pollutant perspective, i.e., the CFB boiler is inherently more efficient at reducing acid gases and NOX than a pulverized coal unit. It would require significant amounts of data and resources to compute and would need to include differences in risk, generation availability, personnel training, etc., but at the end, it still would not be an average cost.

Finally, the results of such an approach could not be compared to results of BACT analyses reviewed by other permitting agencies. The Division is not aware of any permits based upon the approach suggested by Region 4, and therefore, there is no basis for comparison. In contrast, the approach used by EKPC in the application is identical to that used by US EPA Region 8 in Deseret and most, if not all, the comparisons listed by Region 8 in its response to comments. That is, even if we could perform the computations and end up with a number, that number would be meaningless unless compared to similarly derived numbers from similar sources.

**Comment 4:**

*“Table 5-9 of the Statement of Basis (page 29) contains a typographical/mathematical inconsistency. Based on the stated lb/MMBtu emission rates for PM controls, the tons per year (TPY) calculations are incorrect. Instead of 157.68 and 1576.80 TPY, the table should read 1576.8 and 1971.0 TPY, respectively. This inconsistency should be corrected if it appears elsewhere in the draft permit or Statement of Basis.”*

**Division’s Response to Comment 4:**

The Division concurs in part. The table in the Statement of Basis has been revised to read as 157.68 TPY and 197.1, respectively.

**Comment 5:**

*“Table 7-1 of the Statement of Basis (page 51) titled “Impacts of SO<sub>2</sub> and NO<sub>x</sub> Emissions on Vegetation,” provides project only concentrations to compare to the target values provided in the reference “A Screening Procedure for the Impacts of Air Pollution Sources on Plant, Soils and Animal” (EPA-450/2-81-078). The following comments are associated with this table:*

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<sup>1</sup> See for example, New Coal-fired Generation, Costs and Strategies, <http://www.cera.com/aspx/cda/filedisplay/filedisplay.ashx?PK=29043>, which estimates pulverized coal costs at under \$1260/kW and circulating fluidized bed at \$1463/kW. See also <http://media.pennnet.com/documents/Mega+project+pgi+paper.pdf>

- *All target ambient concentrations provided in the reference were not included in this table. The other available averaging periods are 1-hour for SO<sub>2</sub>; and 4-hours, 8-hours, and 1-month for NO<sub>x</sub>.*
- *The ambient concentrations provided in the table were associated with project-only emissions. Because the target values are ambient concentrations that are associated with all emission sources, the estimated impact concentrations provided in the NAAQS compliance assessment (i.e., Table 6-4) are not the more appropriate values for this comparison. [Note: The project only concentrations provided in the table appear to be from the original application and not the revised (May 2009) modeling.]”*

**Division’s Response to Comment 5:**

The Division acknowledges the comment. The Soils and Vegetation Analysis in Section 7.1 of the Statement of Basis has been revised to address these concerns and to more accurately reflect the detailed analysis contained in Section 4.5.1 of Appendix E in the April 3, 2008 application.

**Comment 6:**

*“The Statement of Basis did not include discussion of expected PSD Class II area visibility impacts under Section 7 – Additional Impacts Analysis”*

**Division’s Response to Comment 6:**

The Division concurs. The Statement of Basis has been revised to include the information submitted by EKPC in Appendix E, Section 4.5.3 of the April 3, 2008 application.

**Comment 7:**

*“The following comments are specific to the H<sub>2</sub>SO<sub>4</sub> BACT Analysis.*

- *Table 5-10 and Table 5-11 of the Statement of Basis (page 34) do not seem to agree in their analysis of the control options for H<sub>2</sub>SO<sub>4</sub> emissions from the CFB. Table 5-10 lists the first combination of control options as “CFB, LI, FDA, FF, WESP” with a corresponding annual emission reduction of 624 TPY. However, Table 5-11 lists 624 TPY removed as corresponding to the incremental analysis of a Wet Electrostatic Precipitator (WESP) as compared to “CFB, LI, and FF” as the base case. It is unclear if this 624 TPY reduction is due to just the WESP removal or the combination of FDA and WESP. This should be clarified in the Statement of Basis and any other documents where this inconsistency occurs.*
- *Table 5-11 of the Statement of Basis (page 34) discusses the incremental cost effectiveness of using a WESP instead of the FDA. In making the determination of BACT for H<sub>2</sub>SO<sub>4</sub> controls from the CFB boiler, the Division should also consider the average (or total) cost effectiveness compared to the base case of a CFB boiler w/LI, before a final determination of BACT is made.*
- *Page 36 of the Statement of Basis suggests that the H<sub>2</sub>SO<sub>4</sub> emission limit determined as BACT for other similar projects, which were lower than the*

*proposed for J.K Smith, are due to the underlying lower sulfur content of the fuel used in those projects. Consequently, it seems reasonable that the BACT analysis for H<sub>2</sub>SO<sub>4</sub> should have considered the use of lower sulfur feed stock (i.e., washed coal and PRB coal) in combination with the other proposed control options. EPA recommends that this information, in addition to the analysis suggested in comment #3 above, still be taken into account before the Division makes a final BACT determination for H<sub>2</sub>SO<sub>4</sub> emissions from the CFB boiler."*

**Division's Response to Comment 7:**

The Division acknowledges the comment. In response to this comment, EKPC submitted an additional analysis concluding that fuel switching is cost prohibitive for H<sub>2</sub>SO<sub>4</sub> on both an average and incremental basis. The Statement of Basis has been revised to clarify information in Tables 5-10 and 5-11 and to include updated analysis in accordance with the information provided by EKPC.

With respect to the apparent inconsistencies between Table 5-10 and 5-11, the Division has added language to the Statement of Basis to clarify that the 624 tons per year reduction is the result of the combination of FDA and WESP.

With respect to "average (or total)" cost-effectiveness, the calculation suggested by the EPA was already included, but apparently that fact was not clear. The Division has revised the discussion in the Statement of Basis as follows:

*"The above analysis compares "CFB, LI, FDA, FF, WESP" to "CFB, LI, FF", which results in a difference of 624 tons of sulfuric acid mist removed at a removal cost of \$5519 per ton. While the effect of FDA is reflected in the removal efficiency, the cost of the FDA is not reflected, so the removal cost of \$5519 per ton is under-stated. The analysis also compares "CFB, LI, FDA, FF, WESP" to "CFB, LI, FDA, FF" using the same cost data (i.e., no FDA costs included), but the difference in emissions between the two is only 33 tons of sulfuric acid removed at a cost \$104,364 per ton."*

It should be noted that the comparison performed is not "average or total" cost-effectiveness, but rather is an incremental calculation and does not include costs that are appropriate to include. The analysis does not recognize the cost of the inherent efficiencies of a CFB plus limestone injection to remove sulfur compounds and does not reflect the cost of the SDA, but yet the removal effects of both are shown. It is not clear why EKPC elected to show the removal effects but not the costs. However, this creates a bias only against EKPC's preferred option and is not a bias against the WESP.

In response to this comment, EKPC submitted an analysis concluding that fuel switching is cost prohibitive for H<sub>2</sub>SO<sub>4</sub> on both an average and incremental basis. However, this analysis includes the entire cost of fuel, which is not appropriate since the primary purpose of the fuel is to generate electricity. The following reflects what EKPC filed, which is consistent with data in Table 5-6 and 5-8 which relate to the SO<sub>2</sub> cost analyses, and adjusted to reflect the cost of fuel related to electricity production:

	EKPC Design	Washed Coal	PRB
Heating Value, Btu/lb	8000	12500	8800
S content, % by Weight	3	1	0.35

SO <sub>2</sub> Potential, lb/MMBtu	7.5	1.6	0.8
Tons per Year	1642500	1051200	1493182
Cost per Ton Delivered	\$37.49	\$89.00	\$64.50
Total Fuel Cost	\$61,577,325.00	\$93,556,800.00	\$96,310,239.00
Less Fuel Costs to Produce Electricity	\$61,577,325.00	\$61,577,325.00	\$61,577,325.00
CFB + FDA Cost	\$5,231,788.00	\$2,831,788.00	\$2,831,788.00
H <sub>2</sub> SO <sub>4</sub> Emissions from Boiler, lb/MMBtu	0.05	0.05	0.05
H <sub>2</sub> SO <sub>4</sub> Emissions from FDA, lb/MMBtu	0.005	0.0024	0.0024
Tons Removed	591.3	625.5	625.5
Cost, \$/ton removed	\$8,847.94	\$55,653.50	\$60,055.48

Again, it should be noted that the analysis does not recognize the cost of the inherent efficiencies of a CFB plus limestone injection to remove sulfur compounds but yet

**Comment 8:**

*“According to the draft PSD permit conditions on pages 23, 24, 33, and 34, compliance with the VOC emission limits and the H<sub>2</sub>SO<sub>4</sub> emissions limits of the CFB boilers (emission units 11 and 12) will be demonstrated by compliance with the CO emission limits and SO<sub>2</sub> emission limits, respectively. In order to demonstrate compliance with the VOC and H<sub>2</sub>SO<sub>4</sub> emission limits using surrogates in this manner, initial and periodic testing should be required by the final permit to establish a correlation between the surrogate emissions and the VOC and H<sub>2</sub>SO<sub>4</sub> emissions.”*

**Division’s Response to Comment 8:**

The Division concurs in part. The draft permit requires testing under subsection 3.c. for both Emission Units 11 and 12 to correlate sulfur content of fuel, limestone and fresh lime feed rates, SO<sub>2</sub> CEMS data, and H<sub>2</sub>SO<sub>4</sub> emissions. The draft permit also requires this correlation to be verified annually. The permit has been revised to require a similar correlation for CO and VOC.

**Comment 9:**

*“According to the draft PSD permit, the emission limits established as BACT for the CFB boilers (emission unit 11 and 12) do not apply during startup, shutdown or emergency/malfunction events. While it is understandable that the BACT emission limits proposed for normal operation may not be met during these events, BACT requirements apply to these emission units at all times. EPA recommends that the Division document that compliance with the primary BACT/LAER emission limits for specific pollutants is infeasible during startup, shutdown and maintenance operations. The Division may then establish secondary BACT/LAER limits for any such pollutants, or, if there are limitations on application of a measurement methodology, work practices for those operations. The Division should document that the secondary limits or work practices meet BACT/LAER and ensure that all requirements are met including compliance with the NAAQS and PSD increment provisions. In developing secondary startup/shutdown limits, the Division should consider the optimal use of emission controls, work practices and time constraints for these periods. In addition, the permit should identify these alternative limits as BACT/LAER and not as exemptions.”*

**Division's Response to Comment 9:**

The Division concurs. The permit and Statement of Basis have been revised to clarify that the existing terms and conditions constitute BACT during periods of startup, shutdown and malfunction.

In addition, EKPC noted that natural gas will serve as a startup fuel for the CFB units, which is included as a permit condition. A specific startup shutdown plan for the CFBs will be developed prior to operation based upon the manufacturer's operational manual and will include information on cold, warm, and hot starts. EKPC noted that startup and shutdown events do not impact the BACT analysis for the material handling sources, cooling towers, or roadways.

# ATTACHMENT B - EAST KENTUCKY POWER COMMENTS

Comments submitted by Jerry Purvis, Environmental Manager, East Kentucky Power Cooperative, Inc. (EKPC):

## Permit Application Summary Form

### **Comment 1:**

*"Emission Summary (p. 2) The footnote to the tables states that the "potential totals include existing units". Since the current permitting action only addresses the addition of two coal-fired CFBs and associated material handling, cooling towers and haul roads, EKPC suggests that it would be helpful to only include the emissions associated with the current revision. If emissions from other units are kept in the table it would be helpful to list the emission unit numbers that are included to avoid confusion in the future. Also please note there is a typo in the table in the PM/PM<sub>10</sub> row where it should read "6.74/6.74"."*

### **Division's Response to Comment 1:**

The Division acknowledges the comment. To avoid confusion, the Division has added an additional table that corresponds to emissions associated with this permitting action. The PM/PM<sub>10</sub> typo has been corrected.

### **Comment 2:**

*"On page 3, the reference to "spray dryer absorber (SDA)" should be changed to "fresh lime flash dryer absorber (FDA) consistent with the Statement of Basis."*

### **Division's Response to Comment 2:**

The Division concurs. The Permit Application Summary Form has been revised accordingly.

### **Comment 3:**

*"On page 3, with respect to the requirement to perform an updated BACT analysis for the second CFB unit, EKPC believes the language should be clarified to reflect the need to conduct an updated BACT analysis at least 18 months before starting construction of the unit rather than within 18 months of starting construction. This same comment applies to the Statement of Basis, Project Summary, on page 2."*

### **Division's Response to Comment 3:**

The Division acknowledges the comment. Upon review, the Division has revised the Permit Application Summary Form and Statement of Basis to reflect the language in the applicable regulation [401 KAR 51:017, Section 8(4)(a)].

## Statement of Basis

### **Comment 4:**

*"Section 4.4.4 (p. 10 – 11): EKPC suggest that the references to the regulations that were part of CAMR include the date of the CFR title since future publications of the CFR will not include the vacated regulation. See the comment on the permit below."*

**Division's Response to Comment 4:**

The Division acknowledges the comment and revises the Statement of Basis to explain references to 40 CFR 60 Subpart Da regarding mercury. In the Statement of Basis and permit, references to mercury limitations and compliance measures are based on the March 15, 2005 Federal Register.

**Comment 5:**

*"Section 5 (p. 16): Please note that EKPC used the 1990 Draft NSR Manual simply as a framework for its BACT analysis and recognizes that the manual is unenforceable guidance under Kentucky law and federal administrative decisions. KRS 13A.130; see also Vincent v. Conn, 593 S.W.2d 99 (Ky. App. 1979) (denial of benefits to a person based upon an unpopulated "operations manual" violated the Kentucky statute; the manual had no binding effect); Kerr v. Kentucky State Board of Registration for Professional Engineers and Land Surveyors, 797 S.W.2d 714, 717 (Ky. App. 1990) (basing a decision on procedures or policies in violation of KRS 13A.130 is "a violation of [a person's] due process rights."); see also In re Cardinal FG Co., PSD Appeal No. 04-04, slip op. at 12 (EAB Mar. 22, 2005) (re-affirming that the draft NSR manual is not binding under federal law); see also Alaska Department of Environmental Conservation v. EPA, 540 U.S. 461, 476, n.7 ("Nothing in the Act or its implementing regulations mandates [the] top-down [BACT] analysis [set forth in the 1990 Draft NSR Manual]")."*

**Division's Response to Comment 5:**

The Division acknowledges the comment.

**Comment 6:**

*"Section 5.1.2 (p. 25): Please note that to EKPC's knowledge the emission levels quoted for SO<sub>2</sub> for washed and PRB coal (0.016 lb/MMBtu for washed coal and 0.008 lb/MMBtu for PRB coal assuming 99% control) have not been demonstrated."*

**Division's Response to Comment 6:**

The Division acknowledges the comment.

**Comment 7:**

*"Section 5.1.3 (p. 29): The PM emission rates in Table 5.9 should be listed as 0.012 lb/MMBtu for Fabric Filter and 0.015 lb/MMBtu for ESP. The PM emission rate in tons per year in the second row should be listed as 197.1."*

**Division's Response to Comment 7:**

The Division concurs. The Statement of Basis has been revised accordingly.

**Comment 8:**

*"Section 5.1.3 (p. 30): For the reasons stated in its February 12, 2009 response to NOD #3, EKPC respectfully disagrees with the Division's interpretation of BACT with respect to consideration of polishing devices such as COHPAC<sup>TM</sup>."*

**Division's Response to Comment 8:**

The Division acknowledges the comment.

**Comment 9:**

*“General Comment: Please revise the permit and the SOB to identify 401 KAR 63:020 as a state origin requirement. In response to Kentucky’s request, EPA recently issued a final rule correcting the Kentucky SIP by removing 401 KAR 63:020 from the SIP. See 75 Fed. Reg. 2440 (Jan. 15, 2010).”*

**Division’s Response to Comment 9:**

The Division concurs. The permit and Statement of Basis have been revised to identify 401 KAR 63:020 as a “State Only Requirement”.

**Comment 10:**

*“General Comment: Please note that for some of the new emission units the estimated date for commencement of construction should be updated from 2009 to 2010 consistent with Emissions Unit 11. See EU13, EU 14, EU 15, EU 16a, EU 16b, and EU 17.”*

**Division’s Response to Comment 10:**

The Division concurs. The permit has been updated accordingly.

Emission Unit 11 – CFB1

**Comment 11:**

*“Mercury Conditions – General Comment: EKPC suggests that the Division add a reference to the year when citing to the provisions of 40 CFR since future editions will not include provisions affected by the vacatur of CAMR. See earlier comment regarding the SOB.”*

**Division’s Response to Comment 11:**

Please see the previous response to Comment 4.

**Comment 12:**

*“Section 1 Operating Limitations (p.21-22): EKPC suggests that the Division add a requirement for use of pipeline quality natural gas for startup and stabilization since that was a component of EKPC’s BACT analysis.”*

**Division’s Response to Comment 12:**

The Division concurs. The permit has been revised accordingly.

**Comment 13:**

*“Section 1.d. (p. 22): EKPC requests that the last sentence be revised to read as follows in order to be consistent with the language of Section 1.c. regarding startups: “A Shutdown Event shall not exceed 10 hours, except to avoid equipment damage, unsafe operation, or deviation from established original equipment manufacture (OEM) procedure [401 KAR 51:017/51:017E].” A situation could arise where a shutdown would take longer than 10 hours due to safety concerns or to avoid equipment damage or departure from OEM procedures just like during startup and EKPC believes the permit should be drafted to take into account that type of occurrence.”*

**Division's Response to Comment 13:**

The Division does not concur. The commenter has not provided information indicating that a shutdown exceeding 10 hours would cause equipment damage, unsafe operation or deviation from established original equipment manufacture (OEM) procedure.

**Comment 14:**

*"Section 1 Operating Limitations (p. 22): Should the last sentence of "Compliance Demonstration Method" (for compliance with 401 KAR 63:020) refer to subparagraphs d and h, instead of "d and g" since g addresses sulfuric acid mist emissions and h addresses limits on hazardous air pollutants?"*

**Division's Response to Comment 14:**

The Division concurs. The permit has been revised accordingly.

**Comment 15:**

*"Section 2.a (p.22): EKPC believes the Compliance Demonstration for Section 2.a. should refer to "Total PM10/PM2.5" since there is no total PM limit. Additionally, EKPC requests that the reference to 24-hour average for the lb/MMBtu limits be clarified to read "block average"."*

**Division's Response to Comment 15:**

The Division concurs. The Compliance Demonstration language has been revised for total PM<sub>10</sub>/PM<sub>2.5</sub>. The averaging period for the BACT limit is revised to be consistent with the averaging method listed in 40 CFR 60.48Da(p).

**Comment 16:**

*"Section 2.b.ii (p. 22): For the sulfur dioxide BACT limitation, EKPC requests that the reference to "emergency" be changed to "malfunction" to be consistent with the other BACT emission limitations expressed as lb/MMBtu limits. EKPC understand that the NSPS Subpart Da requirement address "emergency conditions" for SO<sub>2</sub>, but those requirements are covered in 2.b.i. The BACT limit is more stringent than the NSPS limit and is dependant on the proper operation of the limestone injection as well as the dry scrubber. Additionally, the BACT limit is a 24-hour limit as compared the NSPS limit which is a 30-day rolling limit. EKPC also requests that the reference to 24-hour average in 2.b.ii be clarified to read "block average" consistent with 2.b.iii."*

**Division's Response to Comment 16:**

The Division concurs in part. Upon review the Division has corrected the reference of "emergency" to "malfunction". Regarding the "block average" for SO<sub>2</sub>, the permit language is consistent with 40 CFR 60.48Da.

**Comment 17:**

*"Section 3.d (p. 25): Since the permit provides for continuous mercury monitoring, EKPC requests that the condition be revised to allow use of the mercury monitoring data for purposes of demonstrating compliance with the HAP emission limit of 22.5 tons for 12 consecutive months, rather than an emission factor from the stack test. Condition 4.b of the permit requires that mercury emissions be calculated in accordance with 40 CFR 60.50Da(h) so the total mercury emissions for the month would be used in determining compliance with the 22.5 ton HAP limit. This change would also require revision of Section 2.h which specifies use of emission factors for the HAP calculation."*

**Division's Response to Comment 17:**

The Division concurs. The permit has been revised to allow the use of mercury CEMS data to determine mercury emissions when demonstrating compliance with the 22.5 ton per year HAP limit.

**Comment 18:**

*“Section 4.c (p. 26): With respect to 4.c.ii, EKPC requests that the provision be clarified to provide that the missing data which is assumed is the highest value for one day during the previous 30 days. Also, with respect to 4.c.iii, EKPC suggests that the provision require chlorine content to be determined on the fuel as burned, rather than received, and that this should be determined on a monthly, rather than quarterly, basis to be consistent with the language of the Compliance Demonstration for Section 2.h.”*

**Division’s Response to Comment 18:**

The Division concurs. The permit has been revised to clarify missing data is based on the highest recorded hourly concentration in the past 30 days and is to be used for each hour of missing data. The permit has been amended accordingly.

**Comment 19:**

*“Section 4.i (p. 27): EKPC requests clarification that the rates should be recorded on an hourly basis.”*

**Division’s Response to Comment 19:**

The Division concurs. Consistent with 40 CFR 64.4, rates shall be measured at least every 15 minutes and recorded as an hourly average. This clarification has been added to the permit.

**Comment 20:**

*“Section 6.a.i (p. 27): EKPC suggests that the language be revised to read “PM and PM<sub>10</sub>/PM<sub>2.5</sub>” since the limits on particulate matter are expressed in Section 2 of the permit as PM or PM<sub>10</sub>/PM<sub>2.5</sub>.”*

**Division’s Response to Comment 20:**

The Division concurs. The reference to “PM/PM<sub>10</sub>/PM<sub>2.5</sub>” has been revised to PM to satisfy the conditions under subsection 2 for emission units 11 and 12 of the permit.

**Comment 21:**

*“Section 6.a.iv (p. 28): Please confirm that the reference to “control system” and “emission control system” are synonymous.”*

**Division’s Response to Comment 21:**

The Division confirms that these terms are intended to be synonymous in this reference.

**Comment 22:**

*“Section 6.a.viii (p. 29): Please delete the reference to quarterly reports for opacity and substitute PM since the unit will have a PM CEMS rather than a COMs.”*

**Division's Response to Comment 22:**

The Division concurs. The permit has been revised accordingly.

**Comment 23:**

*"Section 6.a.ii and b (p. 28 – 30): Consistent with EKPC's comment in Section 2.b.ii, EKPC requests clarification that the provisions of Section 6.a.ii relate to those permit conditions that impose NSPS limits pursuant to 40 CFR 60, Subpart Da, and the provisions of Section 6.b govern reporting of emissions in excess of other emission limits in the permit as a result of startup, shutdown or malfunction."*

**Division's Response to Comment 23:**

The Division acknowledges the comment. The requirements of subsection 6.a. are specifically subject to the requirements of 40 CFR 60.51 Da (NSPS requirements), while requirements under subsection 6.b are subject to 401 KAR 50:055. Subsection 6.b has been revised to clarify the requirement to report excess of emissions of any emissions limitation.

**Emission Unit 12 – CFB2**

**Comment 24:**

*"The comments above for Emission Unit 11 apply as well to the conditions included for Emission Unit 12 on pages 31-34 of the draft permit. Additionally, although the permit description does not establish enforceable requirements, EKPC requests that the rating for Emission Unit 12 be corrected to read 3061 rather than 3000. (EKPC recognizes that it contributed to the confusion since the DEP7007A form and pages 2-1 of the application stated 3061 while the permit language in Appendix H of the application stated "3060".)"*

**Division's Response to Comment 24:**

The Division acknowledges the comments. Please see the previous responses to comments for Emission Unit 11 - CFB1. The permit has been revised in accordance with the information submitted on the DEP7007A application form.

**Emission Unit 13 – Ash Handling System**

**Comment 25:**

*"Section 3.a and 4.a (p. 42): The reference to 40 CFR 60.8 should be deleted since the emission unit is not subject to an NSPS in 40 CFR Part 60."*

**Division's Response to Comment 25:**

The Division concurs. The permit has been revised accordingly.

**Comment 26:**

*"Section 3.d (p. 42): EKPC requests that the routine frequency of Method 9 readings be changed to monthly instead of weekly since the Division can always request more frequent readings and the permit also requires that pressure drop across the fabric filters must be continuously monitored."*

**Division's Response to Comment 26:**

The Division concurs in part. Monthly Method 9 readings alone are not sufficient to ensure continued compliance with opacity limits; rather, monthly Method 9 readings with daily qualitative observations provide sufficient monitoring to ensure compliance. The permit has been modified accordingly.

**Comment 27:**

*“Section 4.b (p. 42): The last sentence of the condition provides for testing to establish the level of opacity that will be used as an indicator of particulate matter emissions. EKPC is not clear as to the basis for this testing or correlation development. EKPC requests that this last sentence be deleted or that the agency provide guidance on how it expects the testing and correlation requirement to be implemented.”*

**Division’s Response to Comment 27:**

The Division concurs. The permit has been revised accordingly.

**Emission Unit 16a – Limestone Silo Storage and Handling**

**Comment 28:**

*“Section 2.a (p. 53): Pursuant to 40 CFR 60.672(a), since the limestone silos are ducted with their respective companion coal silos to the same fabric filters, the 7 percent opacity limit would not apply. The opacity limit under NSPS only applies if the limestone silo is ducted to its own baghouse. (This change was made in the latest amendments to the NSPS, 74 Fed. Reg. 19294, 19297, 19301, 19311, 19315 (April 28, 2009) (codified at 40 CFR 60.672(f) and Table 2 to Subpart OOO).) EKPC requests this be clarified in the permit. Additionally, EKPC suggests that the NSPS PM limit of 0.014 gr/dscf be included in the permit even though the BACT limit is more stringent.”*

**Division’s Response to Comment 28:**

The Division concurs. The permit has been revised. The NSPS limit has not been included in the permit, however, the Statement of Basis addresses the NSPS limit relative to the BACT limit.

**Comment 29:**

*“Section 2.c (p. 53): On line 3 of the condition there is a reference to “paragraphs a. and b. above”. This could be interpreted to refer to the permit conditions 2.a and 2.b when the reference is straight from the NSPS language. EKPC requests that this be clarified by substituting “40 CFR 60.272”. This also appears to be an issue with Condition 2.c.ii where the language “paragraph a” appears.”*

**Division’s Response to Comment 29:**

The Division concurs. The permit language has been revised accordingly.

**Comment 30:**

*“Section 4.c (p. 54): At the time the application was initially submitted, EKPC submitted a CAM plan which included this, and other, emissions units. However, between the time of submittal and the issuance of the draft permit, EPA amended the applicable NSPS, 40 CFR 60, Subpart OOO. As a result, this unit is subject to an NSPS issued after 1990 so CAM would not apply. Since the permit includes the monitoring requirements of the NSPS, there is no reason to require continuous monitoring or pressure drop across the fabric filters.”*

**Division’s Response to Comment 30:**

The Division concurs. The permit has been revised accordingly.

## Emission Unit 16b – Lime Silo Storage and Handling

### **Comment 31:**

*“Section 3.a and Section 6.a (p. 58): The permit cites to the NSPS as the basis for testing and reporting but the lime operation is not subject to 40 CFR 60 Subpart OOO so citations to 40 CFR Part 60 should be deleted.”*

### **Division’s Response to Comment 31:**

The Division concurs. The permit has been revised accordingly.

### **Comment 32:**

*“Section 4 (p. 58): EKPC requests that the condition be revised to allow use of a bag leak detection system as an alternative to quarterly Method 22 visible observations. Although this unit is not subject to the requirements of 40 CFR 60 Subpart OOO as noted above, it would be helpful to EKPC to have the flexibility to install a bag leak detection system to be consistent with the monitoring requirements for the limestone silo fabric filters and to reduce the burden on individual staff members of tracking multiple visible observation requirements.”*

### **Division’s Response to Comment 32:**

The Division agrees. The permit has been revised as requested.

## Emission Unit 17 – Limestone Unloading and Storage

### **Comment 33:**

*“Section 1.a (p. 60) and Section 7.a (p. 61): EKPC believes that the conditions should read “wet suppression or dust suppression” as stated in the Description, instead of “and”. ”*

### **Division’s Response to Comment 33:**

The Division concurs. The permit has been revised accordingly.

## Emission Unit 18 – Cooling Towers

### **Comment 34:**

*“Section 2.b (p. 63): EKPC requests that the compliance demonstration for this condition provide that compliance with condition 1.a (0.0005% Drift Eliminators) constitutes compliance with condition 2.b regarding reasonable precautions.*

### **Division’s Response to Comment 34:**

The Division concurs. The permit has been revised accordingly.

### **Comment 35:**

*“Section 3 (p. 63): EKPC notes that the referenced performance test method is not recommended for use for all ambient conditions. Specifically, the method states that “periods of excess condensation should be avoided.” EKPC’s testing firm advises that in this region of the country, the optimum months for testing would be June and July, with November through March being identified as unacceptable months. EKPC requests the permit be revised to provide for the test to be scheduled during the summer months or, alternatively for the Division to indicate in its response to comments that it recognizes the concern and will give due consideration to a request to adjust the testing date if the test*

would otherwise fall outside the optimum testing period for the method due to timing of startup of the equipment.”

**Division’s Response to Comment 35:**

The Division acknowledges the comment. The Division will consider the requirements of the test method if a request to delay the testing date due to weather conditions is received.

**Emission Unit 19 – Haul Roads**

**Comment 36:**

*“Section 1.a (p. 64) and Section 7.a (p. 65): Please add the words “as needed” after “application of wet suppression” consistent with the description.”*

**Division’s Response to Comment 36**

The Division concurs. The permit language is revised to require wet suppression when applicable.

**Section D**

**Comment 37:**

*“Section D.2 (p. 68): On the fourth line the citation of 40 CFR Chapter I appears to be incomplete. EKPC suggests the cite be changed to 40 CFR Chapter I, Subchapter C which should encompass the test methods and consideration of alternate procedures.”*

**Division’s Response to Comment 37:**

The Division does not concur. By referencing Chapter I, which includes Subchapter C, equivalent or alternative methods specified in 40 CFR Chapter I, but not necessarily Subchapter C, may be used to demonstrate compliance.

## ATTACHMENT C:

### TRANSCRIPT, GENERAL OR ELECTRONIC COMMENTS

*Comments were received via written submission, electronic submission and during the public hearing February 4, 2010 in Winchester, Kentucky. The Division summarized the topics of concern that were repeatedly addressed throughout these comments. Comments 1-11 include the Division's response to the summarized comments and Comments 12-32 include the Division's response to specific comments.*

**Comment 1 – Citizen Support of the Permit:**

*Citizens favored issuance of the permit.*

**Division's response to Comment 1:**

The Division acknowledges this comment.

**Comment 2 – Citizen Opposition to the Permit:**

*Citizens are opposed to the construction of the CFB units and request that the Division deny the EKPC-JK Smith facility permit.*

**Division's response to Comment 2:**

The Division acknowledges these comments.

**Comment 3 – Pushing areas into Non-Attainment status:**

*Citizens comment that allowing EKPC to construct may put Fayette County and other local regions in non-attainment status by EPA methods. If this occurs, industries that may offer alternative energies solutions in the near future may not be able to construct.*

**Division's response to Comment 3:**

The Division acknowledges these comments.

The Division reviews applications to determine if a facility meets all the requirements of State and Federal Air Quality regulations.

**Comment 4 - Consumer Costs:**

*Citizens comment that the cost of construction and operation of the two CFB units at JK Smith will fall to the ratepayers.*

**Division's response to Comment 4:**

The Division acknowledges these comments.

The Public Service Commission has exclusive jurisdiction over the rates and services of utilities pursuant to KRS 278.040.

**Comment 5 – Alternative and Renewable Energies:**

*Citizens comment that they do not believe alternative methods of energy or renewable sources of energy are being considered and these that methods are available and do not carry health risks. Citizens suggest that alternative methods of energy can provide employment for citizens in the area.*

**Division's response to Comment 5:**

The Division acknowledges these comments.

The PSD permit program requires DAQ to provide the “opportunity for a public hearing for interested persons to appear and submit written or oral comments on the air quality impact of the source, alternatives to it, the control technology required, and other appropriate considerations.” The Division notes that no specific alternative methods of energy were provided by the commenters.

Please see additional information in EKPC Response V-B, V-C, V-C1, V-C2, V-C3, V-C4 submitted on February 25, 2010.

**Comment 6 – Greenhouse Gas Emissions and Global Warming:**

*Citizens comment that they are concerned with the effects of global warming and the climate change as a result from greenhouse gas emissions.*

**Division's response to Comment 6:**

The Division acknowledges these comments.

The Division reviews applications to determine if a facility meets all the requirements of State and Federal Air Quality regulations. Final Permits issued by the Division for Air Quality are written to protect human health and the environment.

KRS 224.10-100(26), as incorporated into Kentucky's State Implementation Plan (SIP), requires the state to implement its PSD program in a manner that is no more stringent than the federal PSD program. Currently, there are no effective federal regulations establishing PSD requirements for CO<sub>2</sub> (or any other greenhouse gas) at stationary sources. Specifically, the Division notes that the “Light-duty motor vehicle rule” is not effective at this time. On December 31, 2008, U.S. EPA issued a Memo which established an interpretation of “subject to regulation” within the federal PSD regulation that “exclude[d] pollutants for which U.S. EPA regulations only require monitoring or reporting but [ ] include[d] each pollutant subject to either a provision in the Clean Air Act or regulation adopted by U.S. EPA under the Clean Air Act that requires actual control of emissions of that pollutant.” Johnson Memo at 1; 73 Fed. Reg. at 80301. U.S. EPA received petitions to reconsider the position taken in the Memo. U.S. EPA continues to adhere to the interpretation reflected in Administrator Johnson's Memorandum of December 18, 2009. 75 Fed. Reg. 17004 (April 2, 2010).

**Comment 7 – Ground Level Ozone and Ozone modeling**

*Citizens comment that they are concerned with ground level ozone. The Clean Air Act requires ozone to be modeled when considering a permit.*

**Division's response to Comment 7:**

The Division does not concur. There are substantive uncertainties in performing ground level ozone modeling. The Division has reviewed the expected increases in ozone precursors from the project and has determined that the expected increase will not cause or contribute to a violation of the current ozone NAAQS.

Please see additional information in EKPC Response III-B, III-B1, III-H, III-H1, IV-A1, IV-A2, IV-A3 submitted on February 25, 2010, and Division's response to Sierra Club Comment III-B1.

**Comment 8 – Particulate Matter Emissions:**

*Citizens comment that they are concerned that the limits for PM<sub>2.5</sub> are set incorrectly and that fugitive PM emissions will not be accounted for. Citizens provide comments on their concern of the effects from soot, smog and PM<sub>2.5</sub> emissions the residential and recreational areas. Citizens complain of the new units adding to the existing smog and posing serious health risks.*

**Division's response to Comment 8:**

The Division does not concur. The emission limitations contained in the permit are correctly applied.

J.K. Smith has submitted an environmental impacts assessment for the CFB project. The Division reviewed the assessment and determined that the environmental impact assessment conservatively evaluates the impact on human health and the environment.

Please see additional information in Division's response to Sierra Club Comment III-H3 and IV-G PM<sub>2.5</sub> and EKPC Response III A, III D, VIII-4 submitted on February 25, 2010.

**Comment 9 – Water Contamination due to Mercury Emissions:**

*Citizens comment on the Mercury emissions from the Smith facility and the dangers of these emissions traveling and accumulating in nearby water sources. The toxin is then ingested by fish and livestock that is a necessary food source for people. Currently, Fish and Wildlife have advisories for fish consumption quantities, particularly for children and women of child-bearing age.*

*EPA is developing mercury emissions standards for power plants under the Clean Air Act. Why permit this facility with emission capabilities, when there is a mercury rule pending?*

**Division's response to Comment 9:**

The Division acknowledges these comments. The Division reviews applications to determine if a facility meets all the current requirements of State and Federal Air Quality regulations. Final Permits issued by the Division for Air Quality are written to protect human health and the environment.

The Clean Air Mercury Rule (CAMR) has been vacated. However, as stated in the U.S. EPA website at <http://www.epa.gov/mercuryrule/>:

EPA is developing air toxics emissions standards for power plants under the Clean Air Act (Section 112), consistent with the D.C. Circuit's opinion (PDF) (18pp, 51k) regarding the Clean Air Mercury Rule (CAMR). EPA intends to propose air toxics standards for coal- and oil-fired electric generating units by March 10, 2011 and finalize a rule by November 16, 2011.

Please note that this permit does contain mercury emission limitations. Mercury is considered a toxic subject to review under 401 KAR 63:020, a state applicable regulation.

Please see additional information in EKPC Response X-H submitted on February 25, 2010.

**Comment 10 – Health Risks:**

*Citizens comment on the general concern for the health risks associated with increased air pollution from the Smith units. Increasing pollutants, increases potential harm to children and adults with respiratory disorders. Mercury emissions may increase the rate of neurological impairments. There is concern that the soot and smog from particulate emissions and ozone contributes to a number of diseases and health problems such as asthma, lung cancer heart disease and strokes.*

**Division's response to Comment 10:**

The Division acknowledges these comments.

The Clean Air Act, which was last amended in 1990, requires EPA to set National Ambient Air Quality Standards (40 CFR Part 50) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. <http://www.epa.gov/air/criteria.html>. The Division reviews applications to determine if a facility meets all the requirements of State and Federal Air Quality regulations.

EKPC performed a Toxic Air Pollutant Risk Assessment to demonstrate compliance with 401 KAR 63:020, which states that:

No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants.

The Division determined air toxic emissions from the proposed project to be in compliance with the requirements of 401 KAR 63:020.

Please see the Division's Response to Comment 8.

**Comment 11 – Permitting under existing Air Quality Standards:**

*Citizens comment that they are concerned that the draft permit is written under Sulfur dioxide, mercury and coal ash standards that are currently being revised. They are concerned that these units will have the ability to operate far into the future under less stringent regulations. The Division should deny the permit until regulations that are currently being revised are complete.*

**Division's response to Comment 11:**

The Division acknowledges these comments.

The Division reviews applications to determine if a facility meets all the current requirements of State and Federal Air Quality regulations.

**Comment 12:**

*Susan Baker Williams: "Additional smog from the Smith plant could push Fayette County into nonattainment status for air quality. If the federal air standard is violated, it could mean that Fayette County could lose highway funding dollars, have to start undergoing vehicular tailpipe testing, and incur other penalties."*

**Division's response to Comment 12:**

The Division acknowledges this comment. Please see the Division's Response to Comment 3.

**Comment 13:**

*Ed Zuger: "Best Available Control Technology (BACT) analysis requires the Division to consider not only the energy impacts that arise from the permit, but also environmental and economic impacts. 401 KAR 51:001. I realize, and bring to the Division's attention, that problems exist in its evaluation of the latter two impacts."*

*"A telling study about the effects of this permit on ratepayers, in terms of its economical impact, has been prepared by a public policy consultancy. Though the study does not specifically address this permit's BACTs, it emphasizes that EKPC's proposed Smith additions negatively effect the economic situation of Kentuckian ratepayers. It points to nearly 100 similar projects that have been abandoned nationwide in recent years, over 20 of which ceased in 2009. It concludes that the Smith plant strikes against EKPC's credit position in the marketplace, thereby increasing the costs associated with loans to fund the plant; if EKPC can even acquire such funding. It echoes EKPC's own admission that the initial estimates associated with demand—i.e., the driving force behind even constructing the additions—are no longer valid, nor reliable; and, in fact, are diminishing in the face of our current economy. And, in summary, it posits that continuing the construction of Smith will cost ratepayers more than is necessary to serve their energy needs."*

*"EKPC would argue against the validity of this study because it was prepared for groups that oppose the permit. That, essentially, is a he-said, she-said, contention that simply disengages from the value of independent studies."*

*"I urge the Division to review a copy of this valuable study to better understand the economic impacts of the proposed BACTs."*

**Division's response to Comment 13:**

The Division acknowledges this comment. As stated previously, the Kentucky Public Service Commission has exclusive jurisdiction over the rates and services of utilities pursuant to KRS 278.040.

**Comment 14:**

*Rachel Harrod: "We need to cut world greenhouse gas emissions 80% below 1990 levels by mid-century at the very latest if we hope to avoid the worst consequences of climate change, such as the displacement of millions of people, the rapid proliferation of disease-carrying and crop-destroying insects, widespread shortages of freshwater, and increased violent weather patterns."*

**Division's response to Comment 14:**

The Division acknowledges this comment. Please see the Division's Response to Comment 6.

**Comment 15:**

*Tona Barkley: "US Supreme Court said Carbon Dioxide is an air pollutant in its 2007 decision stating that Greenhouse Gases fits well within our Clean Air Act's definition of an air pollutant, emissions that may reasonably be anticipated to endanger public health or welfare. The Court also said the harms associated with climate change are serious and well-recognized."*

**Division's response to Comment 15:**

The Division acknowledges this comment. Please see the Division's response to Comment 6.

**Comment 16:**

*Wallace McMullen: "Lexington is only about 25 miles form the Smith plant site, and Fayette County is rates an air quality "F" for high levels of ozone by the American Lung Association."*

*"Yet Our lawyer tells us that no site specific ozone modeling and analysis was done by DAQ in evaluating the permit. They accepted estimates from the applicant based on modeling done for an implementation plan in Georgia."*

**Division's response to Comment 16:**

The Division acknowledges this comment. Please see the Division's response to Comment 7.

**Comment 17:**

*Wallace McMullen: "In the Statement of Basis, DAQ says "The application included a qualitative assessment of Smith's particular Matter." But this is incorrect reasoning for permitting a large pollution source. Neither the applicant nor the agency established a strong statistical relationship between PM10 and PM 2.5 emissions. Further, the agency has failed to follow followed the clear principles set out in EPA's Trimble Decision for when it is appropriate to use the PM 10 as the surrogate for PM 2.5. And in the limited modeling that was done, the PM10 came out at an impact level five times greater than the Significant Impact Level for 24 hour concentrations, so the amount of particulate matter put into the air by Smith clearly needs to be carefully addressed."*

**Division's response to Comment 17:**

The Division acknowledges this comment. Please see the Division's response to Comment 8.

**Comment 18:**

*Ed Zuger: "Particulate Matter – Whether a fabric filter, with the resulting lime cake issues as above, or a wet solution that results in pollutant slurry, the BACT of PM is problematic to the environment."*

**Division's response to Comment 18:**

The Division acknowledges this comment. The Division has given appropriate considerations to environmental effects while conducting the BACT analysis. Please see the Division's response to Comment 8.

**Comment 19:**

*Ramesh Bhatt: "The new facilities are allowed to put out more than 50 pounds per year [of mercury]. According to the draft permit, the Division for Air Quality is asking EKPC to reduce mercury only by 30%, whereas there are many facilities currently operating in the US that have achieved more than 85-90% efficiency in reducing mercury."*

**Division's response to Comment 19:**

The Division acknowledges this comment. The emission limitation included in the permit is based upon pounds of mercury released per megawatt hour and not determined by control efficiency. Please see the Division's response to Comment 9.

**Comment 20:**

*Carolyn Embry: "Coal-fired power plants are among the largest contributors to many types of dangerous air pollution affecting lung health, in addition to other environmental impacts such as water contamination, acid rain and global warming. Included among the harmful air contaminants that the Smith plant would emit are toxic air pollutants, carbon monoxide, sulfur dioxide, particulate matter and the ozone forming chemicals, nitrogen oxides and volatile organic compounds. Each of these air contaminants contributes to adverse health effects, including episodes of asthma, breathing impairment in patients with COPD and premature death."*

**Comment 21:**

*John Patterson: "I see adults with heart and lung disease and children with asthma, learning disabilities and speech and language delays brought on by aggravated air pollution. Coal-fired power plants are the number 1 cause of air pollution in Kentucky and contribute to disabling disease in children and adults and cause premature deaths that could be avoided with cleaner air. Coal fired power plants release fine particulate matter that create and aggravate heart disease and lung disease including asthma and chronic obstructive pulmonary disease."*

**Comment 22:**

*Remesh Bhatt: "In 2001, in response to an executive order by Governor Paul Patton, the KY Natural Resources and Environmental Protection cabinet came out with a study entitle "A Cumulative Assessment of the Environmental Impacts Caused by Kentucky Electric Generating Units." After extensive analysis and pollution monitoring the Cabinet determined the following about the J.K. Smith Plant. I'm quoting from Appendix B, page 10: "The J.K. Smith plant shows relatively high emission rates of two compounds predicted to exceed their Risk-Based Screening Values (arsenic and nickel)." Risk-Based Screening values mean values beyond which human health is affected significantly. Now,*

Appendix A-D

*Arsenic and Nickel are both known carcinogen (among other things arsenic causes lung cancer, and Kentucky is one of the leaders in the nation in terms of lung cancer)."*

**Comment 23:**

*James Hamblin: "According to a 2004 study by the clean air task force, every year in Kentucky, exposure to pollutants such as mercury and soot emitted by coal-burning power plants kills 745 people, puts 639 in hospitals, and causes 1,022 heart attacks."*

**Division's response to Comments 20-23:**

The Division acknowledges this comment. Please see the Division's response to Comment 10.

**Comment 24:**

*Megan Naseman: "EPA's national ambient air quality standards for nitrogen oxides just recently became more strenuous. Similarly new more stringent sulfur oxide standard will be issued by the EPA this July well before the plant is slated to be on-line. The point that I'm getting at here is that the standard EKPC is using right now to tell us the emissions from this plant will be safe were created when my mom was twelve years old, in 1971. The study of those standards were based on was done in 1969. Since then science has evolved and the EPA has deemed those old standards unsafe. Building a new power plant according to old dangerous standards is ridiculous."*

**Division's response to Comments 24:**

The Division acknowledges these comments. The Division reviews applications to determine if a facility meets all the current requirements of State and Federal Air Quality regulations.

**Comment 25:**

*Rick Clewett: "I would question the appropriateness of permitting both Smith 1 and 2 at the same time, when Smith 2 will clearly not be built within the next 8 or 10 years. What sense does it make to use current air quality standards, which are this very minute in the process of being made more stringent."*

**Division's response to Comments 25:**

The Division acknowledges these comments. EKPC is proposing to construct the two CFB boilers in two different phases. EKPC indicated in their application that the first CFB will be constructed in phase one, with construction expected to commence in 2010. This phase will include CFB1, cooling tower for CFB1, and all the material handling facilities necessary for both CFB1 and CFB2. Phase two is expected to commence by August 1, 2013, and will consist of CFB2 and its associated cooling tower. Both phases are addressed in the application, but EKPC will be required to submit an updated BACT analysis no later than 18 months prior to commencing construction of CFB2.

**Comment 26:**

*Remesh Bhatt: "The language about CFB2 (Smith 2) is confusing. The draft permit says that both phases (i.e., Smith 1 and 2) are addressed in the application, but EKPC will be required to submit an updated BACT analysis (quote) "within 18 months of beginning construction of CFB2." (page 3 of permit application summary). What does "within beginning of construction" mean? Does it mean "before" or "after" the beginning of construction? If it is after, what is the logic of performing BACT analyses after a plant is built and perhaps has even started functioning?"*

**Division's response to Comment 26:**

The Division concurs. The permit has been revised to better understand the phases of construction and updated BACT analysis must be submitted no later than eighteen months prior to construction.

**Comment 27:**

*Ed Zuger: "Nitrogen Oxides Controls – The selective non-catalytic reduction technology proposed will increase ammonia use that creates additional particulate matter emissions; this, despite the contention that a fabric filter will control the control. That this SCNR effect is "not as great as" that which results from SCR technologies does not allay the concern."*

**Division's response to Comment 27:**

The Division acknowledges this comment. Ammonia is not a regulated precursor to the formation of PM<sub>2.5</sub>.

**Comment 28:**

*Ed Zuger: "Sulfur Dioxide Controls – A waste treatment facility, or de watering pond will be added to the project, thereby negatively impacting the surrounding physical environment. Additional problems result from an increase (again) of particulate matter, and of sulfuric acid mist. The added lime not only increases particulate matter associate with its transport, conveyance, and storage, but the filtered lime cake will react with acid gasses."*

**Division's response to Comment 28:**

The Division acknowledges this comment. The SO<sub>2</sub> control is a dry-process and does not require a dewatering pond.

**Comment 29:**

*Ed Zuger: "Sulfuric Acid Mist – EKPC states that another wash-water slurry will result, but de-emphasizes the sulfuric acid mist problem by piggy-backing the direct effect to that associated with sulfur dioxide BACT. In fact, this direct effect is additional to that associated with sulfur dioxide BACT, and should be viewed as such."*

**Division's response to Comment 29:**

The Division acknowledges this comment. The SO<sub>2</sub> control is a dry-process and does not require a dewatering pond.

**Comment 30:**

*Ed Zuger: "EKPC says "no significant economic, environmental, or energy impact" from its method of controlling carbon monoxide!? How can this be? Who concurs on the point of insignificance?"*

**Division's response to Comment 30:**

The Division acknowledges this comment. Carbon monoxide (CO) is a byproduct of incomplete combustion. Good combustion practices are considered BACT for CO emissions. There are no significant economic, environmental, or energy impacts from good combustion practices.

**Comment 31:**

*Ed Zuger: “EKPC says “no significant economic, environmental, or energy impact” from its method of controlling volatile organic compounds!? How can this be? Who concurs on the point of insignificance? Statement of Basis, 16-40.”*

**Division’s response to Comment 31:**

The Division acknowledges this comment. VOCs are byproducts of incomplete combustion. Good combustion practices are considered BACT. There are no significant economic, environmental, or energy impacts from good combustion practices.

**Comment 32:**

*Craig Williams: “Mass Balance reviews of emissions anticipated to be released from the Smith Plant must include considerations of unidentified quantities of pollutants and must not assume unidentified emissions are not negatively health impacting.”*

**Division’s response to Comment 32:**

The Division acknowledges this comment. The pollutants reflected in the application are consistent with pollutants found in other coal-fired plants. With respect to hazardous air pollutants, the application identifies pollutants listed in US EPA’s 1998 “Study of Hazardous Air Pollutants Emissions from Electric Utility Steam Generating Units – Final Report to Congress” supplemented with hazardous air pollutants listed in AP-42.

# ATTACHMENT D

## 915 COMMENTS RECEIVED BY EMAIL

*The Division received 146 nearly identical emails which state as follows:*

**Comment 1 (Emails #769-914):**

*"Please support clean air and the health of Kentuckians by denying East Kentucky Power Cooperative's draft air permit for their proposed coal-burning Smith power plant. This power plant poses an unacceptable and avoidable risk to Kentuckians.*

*The Smith plant will emit disease-causing pollutants such as particulate matter, also known as soot. As one of the most deadly air pollutants, there are no safe levels of soot. Every year, the soot and other pollutants from coal-burning power plants send hundreds of Kentuckians to an early grave due to illnesses such as asthma, lung cancer and heart attacks.*

*Additionally, Kentucky already has an advisory against eating fish caught anywhere in the state due to mercury pollution. Adding the Smith plant-which will burn waste coal that has an even higher mercury content than regular coal-will only add to this already enormous health and environmental risk in our state.*

*Also, the Smith plant will produce harmful emissions that create smog. Smog has detrimental health effects such as asthma and lung damage, and it even kills people. EKPC claims that the units at the Smith plant will be very similar to their Spurlock Units #3 and #4 in northern Kentucky. That is unfortunate because EKPC's own monitor shows that the level of smog near Spurlock Units #3 and #4 exceeds the federal healthy levels and is unsafe.*

*Finally, all of the pollution from the proposed Smith plant can be avoided. EKPC has an alternative before them that would cost less than the Smith plant. If they invested in an aggressive program of energy efficiency, weatherization, and renewable energies, EKPC could offset the energy that would be generated by the Smith plant and prevent the emission of pollutants that will only bring more harm to Kentuckians.*

*Kentucky simply cannot afford any more dirty coal-burning plants in our state. We urge you to stand on the side of clean air and public health by rejecting the draft permit."*

**Division's Response to Comment 1:**

The Division acknowledges these comments.

The Clean Air Act, which was last amended in 1990, requires EPA to set National Ambient Air Quality Standards (40 CFR Part 50) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

<http://www.epa.gov/air/criteria.html>. The Division reviews applications to determine if a facility meets all the requirements of State and Federal Air Quality regulations.

EKPC performed a Toxic Air Pollutant Risk Assessment to demonstrate compliance with 401 KAR 63:020, which states that:

No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants.

The Division determined air toxic emissions from the proposed project to be in compliance with the requirements of 401 KAR 63:020.

Also, please refer to the Division's responses to Comments 5, 7, 8, and 9 in Attachment C.

***In addition to Comment 1 above, some of the 146 emails included additional comments, which are addressed individually below:***

**Comment 1a (Email #829):**

*"I stand with my friends who live in Clark County, and would be subject to the pollution from the new Smith coal-burning plant, and ask you to deny the final air pollution permit for this plant.*

*I ask you to take into consideration the fact that two Kentuckians die every day as a result of air pollution from coal burning. I want to know how you have taken public health considerations into your decision about issuing this permit, and if you are considering cumulative impacts when you allow more deadly toxins into our air.*

*There are lots of good reasons EKPC's Smith plant should not be built. Protecting the health of Kentuckians should be among your top considerations for denying this permit."*

**Division's Response to Comment 1a :**

The Division acknowledges the comment. Please refer to the response to Comment 1.

**Comment 1b (Email #788):**

*"EKPC claims to be employing the most current technology in its proposed Smith plant. In fact, that is not the case. There are current construction designs that have better demonstrated emissions than the Smith design.*

*Fluidized bed combustion plants produce far greater rates of polycyclic aromatic hydrocarbons than other plant designs. Several PAHs are identified carcinogens that have been implicated in increased cancer rates proximal to FBC power plants.*

*Support the part of your mission that states that "air pollution should be prevented or reduced whenever possible." EKPC has, at their disposal, demonstrated alternatives to another coal-fired power plant."*

**Division's Response to Comment 1b:**

The Division acknowledges the comment. The pollution control technologies proposed by EKPC were evaluated and determined to be the Best Available Control Technology (BACT) according to 401 KAR 51:017.

Additionally, please refer to the response to Comment 1.

**Comment 1c (Email #793):**

*"Do you realize you breathe this same air and drink this same water you are polluting? You can either go with the flow or fight the tide."*

**Division's Response to Comment 1c:**

The Division acknowledges the comment.

**Comment 1d (Email #796):**

*"Moreover, I personally have severe asthma and will be affected by dirty emission increases."*

**Division's Response to Comment 1d:**

The Division acknowledges the comment. Please refer to the response to Comment 1.

**Comment 1e (Email #808):**

*"I oppose the building of a power plant in Clark County."*

*"It costs a lot more to create energy than to conserve energy."*

**Division's Response to Comment 1e:**

The Division acknowledges the comment.

**Comment 1f (Email #814):**

*"Please do not allow a new coal burning plant in Kentucky. We have all read that these plants are disastrous to the health of our citizens, especially our young. Our power plants cause asthma and other diseases that afflict the young and the old. Please help protect our children. Look at the newer and better alternatives."*

**Division's Response to Comment 1f:**

Please see the Division's response to Comment 1.

**Comment 1g (Email #817):**

*"I support the construction of the Smith Plant!"*

**Division's Response to Comment 1g:**

The Division acknowledges the comment.

**Comment 1h (Email #826):**

*"Please deny East Kentucky Power Cooperative's draft air permit for their proposed coal-burning Smith power plant. As a physician, a parent, and a citizen of this state, I feel that another dirty coal-burning plant is not what we need."*

*The proposed Smith plan will soot, mercury, and smog. There are studies that show high levels of mercury in precipitation near coal-fired plants, such as Clifty in Trimble County. Mercury is a dangerous neurotoxin, affecting fetuses and causing brain damage."*

*Every day I see children who are autistic, have learning disabilities or mental retardation. Their numbers are on the rise. How can we continue to poison our own children, when there are alternatives available?*

*Do you remember when a person could eat fish and safely eat it? Those days are gone, thanks to coal-fired power plants. There are no safe streams in Kentucky for fishing due to mercury levels. This proposed Smith plant-which will burn also waste coal that has higher mercury content than regular coal.*

*I have not mentioned the effects of particulates on children who have asthma (which has skyrocketed in the past 20 years,) and adults with respiratory problems. The carcinogens in this kind of air pollution are also a concern. EKPC claims that the units at the Smith plant will be very similar to their Spurlock Units #3 and #4 in northern Kentucky. EKPC's monitor shows that the level of smog near Spurlock Units #3 and #4 exceeds the federal healthy levels and is unsafe.*

*What is the hidden cost of thousands of lives and the health of our people, not written in this proposal? That does not even take into account the use of coal from a very destructive mining process that is ruining our watersheds and putting carcinogens in our water.(i.e. selenium, see the January Science article on this)*

*The pollution from the proposed Smith plant can be avoided by using energy efficiency, weatherization, and renewable energies. EKPC has this plan, and it is cheaper as well.*

*How can anyone justify another coal burning power plant in this state? It is a travesty to kill your own people, when you aren't working to use cleaner energy sources and conservation to get the electricity you need."*

**Division's Response to Comment 1h:**

The Division acknowledges the comment. Please see the Division's response to Comment 1.

**Comment 1i (Email #828):**

*"I realize that as a member of a government environmental regulatory group, your job is swamped with political garbage and the opinions of millions.*

*I do want to take this time to remind you of the obvious in case you have lost focus, even a little. Humans can survive without fossil fuels; they cannot survive without air and water. These resources are invaluable to each of us and constantly degraded by all of us. Please take responsible action on behalf of me and promote the cleanest options possible.*

*I was inspired by a recent trip to Minnesota where an array of Wind Turbines stretched literally from horizon to horizon. Real positive change is being made, and we can be a part of that.*

*I am discouraged in seeing how cheap the cost of coal electricity is, despite the fact that our government spends billions of tax dollars cleaning up after these companies. Fossil fuels are unfairly subsidized through government sponsored cleanup at facilities such as the Kingston fly-ash storage lake that broke last summer.*

*Fossil fuels are not cheap, they cost us tax dollars and health standards."*

**Division's Response to Comment 1i:**

The Division acknowledges the comment. The pollution control technologies proposed by EKPC were evaluated and determined to be the Best Available Control Technology (BACT) according to 401 KAR 51:017. Regarding cleaner options please see the Division's response to Comment 5 in Attachment C.

**Comment 1j (Email #844):**

*"KEEP THIS PLANT FROM GOING ANY FURTHER. IT WILL DO MORE HARM THAN GOOD."*

**Division's Response to Comment 1j:**

The Division acknowledges the comment.

**Comment 1k (Email #864):**

*"I strongly oppose the construction of this new plant.*

*Clean air is non-negotiable. This plant will be part of the problem. The time is now to get our priorities straight. We must progressively conserve what is truly important: clean air, clean water, and a healthy home for us and our children to come."*

**Division's Response to Comment 1k:**

The Division acknowledges the comment.

**Comment 1l (Email #866):**

*"I don't want this plant built. It would be the ultimate in stupidity!"*

**Division's Response to Comment 1l:**

The Division acknowledges the comment.

**Comment 1m (Email #897):**

*"I live downwind of the proposed Clark County "Smith" coal-fired power plant. We have long since passed the point where we can continue to spew pollutants and greenhouse gases into our air anywhere. But the Smith plant bothers me an additional way. I am going to be right in the path of pollutants it is going to spew into the air. Just for an example, one of them is mercury. If you've paid any attention in your dentist's office to the handling of the mercury in the so-called "silver amalgam" fillings dentists put in your mouth, you will realize that they are treated as toxic waste, which they certainly are. Yet many people apparently have no qualms about filling the air we breathe with mercury.*

*Soot is another of the pollutants. Eastern Kentuckians already have a very high degree of lung diseases. The particulates in soot are part of the problem. And they are just a start.*

*The irony is that East Kentucky Power could spend the money needed for Smith in giving away energy-saving technology such as fluorescent bulbs, LED lights, appliances, and insulation, along with grants for backfitting houses with energy-saving technology, and it would cost a great deal less than the plant and the unending need to buy coal to run it, not to mention the considerable damage to the land to get that coal. The attitude of East Kentucky Power is a perfect illustration of the old saying, "If what you have is a hammer, then every problem looks like a nail." They simply are not able to see any solution except for power plants and more coal.*

*You need to see that for them, for the sake of all Kentuckians.*

*Because of this, I ask you to please support clean air and the health of Kentuckians by denying East Kentucky Power Cooperative's draft air permit for their proposed coal-burning Smith power plant."*

**Division's Response to Comment 1m:**

The Division acknowledges the comment. Please see the Division's response to Comments 5, 6, 8, 9, and 10 in Attachment C.

**Comment 1n (Email #906):**

*"Finally, all of the pollution from the proposed Smith plant can be avoided. The rest of this letter is full of points that I agree and affirm, but did not write myself. This, it seems, is the most important point: EKPC has an alternative before them that would cost less than the Smith plant. If they invested in an aggressive program of energy efficiency, weatherization, and renewable energies, EKPC could offset the energy that would be generated by the Smith plant and prevent the emission of pollutants that will only bring more harm to Kentuckians.*

*I want to be able to raise my little boy here in my home state, knowing that as a state, we're doing everything we can to make the state viable for his future, and the air breathable for his lungs. We urge you to stand on the side of clean air and public health by rejecting the draft permit."*

**Division's Response to Comment 1n:**

The Division acknowledges the comment. Please see the Division's response to Comment 5 in Attachment C.

**Comment 1o (Email #907):**

*"Please support clean air and the health of Kentuckians by denying East Kentucky Power Cooperative's draft air permit for their proposed coal-burning Smith power plant. I have been warned that this power plant may pose an unacceptable and avoidable risk to Kentuckians.*

*It is mentioned that the Smith plant will emit disease-causing pollutants such as particulate matter, also known as soot. As one of the most deadly air pollutants, it is reported that there are no safe levels of soot.*

*There are claims that, every year, the soot and other pollutants from coal-burning power plants send hundreds of Kentuckians to an early grave due to illnesses such as asthma, lung cancer and heart attacks.*

*Additionally, Kentucky already has an advisory against eating fish caught anywhere in the state due to mercury pollution. Adding the Smith plant-which will burn waste coal that has an even higher mercury content than regular coal-will only add to this already enormous health and environmental risk in our state.*

*Also, the Smith plant may produce harmful emissions that create smog. Smog has detrimental health effects such as asthma and lung damage, and it even kills people. EKPC claims that the units at the Smith plant will be very similar to their Spurlock Units #3 and #4 in northern Kentucky. That is unfortunate because EKPC's own monitor shows that the level of smog near Spurlock Units #3 and #4 exceeds the federal healthy levels and is unsafe.*

*Finally, all of the pollution from the proposed Smith plant can be avoided. EKPC has an alternative before them that would cost less than the Smith plant. If they invested in an aggressive program of energy efficiency, weatherization, and renewable energies, EKPC could offset the energy that would be generated by the Smith plant and prevent the emission of pollutants that will only bring more harm to Kentuckians.*

*Kentucky simply cannot afford any more dirty coal-burning plants in our state. We urge you to stand on the side of clean air and public health by rejecting the draft permit."*

**Division's Response to Comment 1o:**

The Division acknowledges the comment. Please see the Division's response to Comments 5 and 7-10 in Attachment C.

***The Division received 310 nearly identical emails which state as follows:***

***Comment 2 (Emails #460-758):***

*"I am writing to convey my concern for Eastern Kentucky Power Cooperative's proposed Smith Plant (Permit V-05-070 R3).*

*The Smith plant will emit disease-causing pollutants such as particulate matter, or soot. There are no safe levels of soot. It is one of the most deadly air pollutants and Kentucky already has some of the highest coal pollution rates in the nation. Every year, hundreds of Kentuckians die prematurely due to illnesses such as asthma, lung cancer and heart attacks associated with burning coal."*

**Division's Response to Comment 2:**

The Division acknowledges the comment. Please see the Division's response to Comments 8 and 10 in Attachment C.

***In addition to Comment 2 above, some of the 310 emails included additional comments, which are addressed individually below:***

***Comment 2a (Email #470):***

*"I urge you to stand on the side of clean air and public health by rejecting the draft permit*

*I know this as a result of my own personal experience staying in the southwest corner of Louisville during the week while I work at Fort Knox. I used to run but there are days I would leave my apartment at 0500 and just go back in the air was so bad. This happened just a day ago, too.*

*The Auburndale neighborhood of Louisville is about 10 miles downwind from the Mill Creek power station. That is I'm northeast of the coal-fired power plant with three belching smokestacks and one enormous fly ash pile and a second in the making. I suspect that is why some mornings in this corner of Louisville the air is so bad. Louisville/Jefferson County has been shown by the Kentucky Medical Association (KMA) to be an area where there are higher than normal cancer deaths (1). How much of this can be attributed to the power plant?*

*According to the KMA: Kentucky ranks sixth in heart disease death rate in the US behind MS, OK, DC, AL and WV, 23% of all deaths in KY are caused by heart disease and finally in these fiscally tight times the cost in 2004 in KY for hospitalization for*

cardiovascular related diagnoses was over \$2 billion. It has been shown that combustion-derived air pollution is associated with adverse cardiovascular events (2). There is a demonstrated association of air pollution from traffic and lung function in asthma (3).

And it has been documented that tons of mercury are dumped into the air yearly by coal-fired power plants. It is thought that this is where the mercury contamination of sea fish comes from. Coal-burning power plants are the largest anthropogenic source of mercury emissions in the US in 2005, 51% of a total of 103 tons per year (4). So quality of life, air and water quality, cardiovascular and respiratory illness and cancer risks and the expense they incur as well as risks to the environment are all reasons not to proceed with the Smith Plant.

1.<http://cancer-rates.info/ky/index.html>

2. *New England Journal of Medicine*, Vol. 357, pp. 1075-1082, 13 September 2007. This study concerns the adverse cardiovascular effects of dilute urban diesel exhaust.

3. *New England Journal of Medicine*, Vol. 357, pp. 2348-2358, 6 December 2007. This study shows decreases in lung function following walking in Hyde Park, London, most consistently related to the exposure to ultrafine particles and elemental carbon.

4. <http://cfpub.epa.gov/eroe/index.cfm?fuseaction=detail.viewInd&lv=list.listByAlpha&r=188199&subtop=341>”

**Division’s Response to Comment 2a:**

The Division acknowledges the comment. Please see the Division’s response to Comments 9 and 10 in Attachment C.

**Comment 2b (Email #480):**

“I am writing to convey my concern for Eastern Kentucky Power Cooperative's proposed Smith Plant (Permit V-05-070 R3).

The Smith plant will emit disease-causing pollutants such as particulate matter, or soot. There are no safe levels of soot. It is one of the most deadly air pollutants and Kentucky already has some of the highest coal pollution rates in the nation.

It is past time that coal-based electricity producers are made to internalize their costs of production. They must HALT the discharge of dangerous pollutants, or they should be made to pay for the harms caused by these pollutants. Only then do we have a free market, rather than a subsidized market.

I urge you to stand on the side of clean air and public health by rejecting the draft permit”

**Division’s Response to Comment 2b:**

The Division acknowledges the comment. Please see the Division’s response to Comments 4, 8, and 10 in Attachment C.

**Comment 2c (Email #531):**

“In addition to the negative health impacts of airborne pollutants are the equally damaging effects of groundwater pollution caused by coal-based energy production.”

**Division’s Response to Comment 2c:**

The Division acknowledges the comment.

**Comment 2d (Email #538):**

*"I am writing to convey my concern for Eastern Kentucky Power Cooperative's proposed Smith Plant (Permit V-05-070 R3).*

*There is a reason Kentucky is called the Nation's ashtray. No one here even tries to change the ideas that go hand in hand with causing poor health and destroying the beautiful resources of this state. Show the citizens and the rest of the country that Kentucky is not a backward ignorant State. Prove that we can change the previous mistakes that have been made. There are many environmentally safe equally profitable ways to have energy. King Coal has been in control too long!*

*I urge you to stand on the side of clean air and public health by rejecting the draft permit"*

**Division's Response to Comment 2d :**

The Division acknowledges the comment. Please see the Division's response to Comment 5 in Attachment C.

**Comment 2e (Email #541):**

*"A healthy future for all is my best wish. For without health, there is no quality of life."*

**Division's Response to Comment 2e:**

The Division acknowledges the comment.

**Comment 2f (Email #549):**

*"Isn't it time that we acknowledge those facts and take intelligent steps to change this regretful standing in the world."*

**Division's Response to Comment 2f:**

The Division acknowledges the comment.

**Comment 2g (Email #551):**

*"I am also concerned about our water, the risks to the wetlands, and sludge control. It is time that Kentucky begins seeking alternatives to dirty energy and encourages conservation measures so that Kentucky is a leader rather than a laughing stock. It could be an exciting time for our state."*

**Division's Response to Comment 2g:**

The Division acknowledges the comment. Please see the Division's response to Comment 5 and 9 in Attachment C.

**Comment 2h (Email #558):**

*"We have alternatives for energy- why not more hydro-electric power- it is clean and renewable. Please take careful steps- and think of the human costs."*

**Division's Response to Comment 2h:**

The Division acknowledges the comment. Please see the Division's response to Comment 5 in Attachment C.

**Comment 2i (Email #563):**

*"Mercury, lead, and arsenic are also released into the air as a result of burning coal."*

**Division's Response to Comment 2i:**

The Division acknowledges the comment. Please see the Division's response to Comment 9 and 10 in Attachment C.

**Comment 2j (Email #578):**

*"The science is clear that burning coal in electric power plants is a dirty undertaking. The one thing we know here in Kentucky is that we will not regulate anything to do with coal and will not enforce current laws concerning clean water and air. My family is at risk from any new coal related power plants. These plants must be stopped before more young children are killed."*

**Division's Response to Comment 2j:**

The Division acknowledges the comment. Please see the Division's response to Comment 9 and 10 in Attachment C.

**Comment 2k (Email #582):**

*"It hurts me right down to my very core to know that there are people who would allow for such a happening to take place. As a fellow human being please consider the above statement and think about the people this would effect."*

**Division's Response to Comment 2k:**

The Division acknowledges the comment.

**Comment 2l (Email #583):**

*"I know that most Kentuckians, including myself, have family ties with coal, but we KNOW FOR A FACT that it is harmful to our environment. It is our choice to make the first step in the right direction so our children might have the beautiful state when they're grown and building families of their own. The Smith plant will emit disease-causing pollutants such as particulate matter, or soot. There are no safe levels of soot. It is one of the most deadly air pollutants and Kentucky already has some of the highest coal pollution rates in the nation. Every year, hundreds of Kentuckians die prematurely due to illnesses such as asthma, lung cancer and heart attacks associated with burning coal. Either we can keep supporting coal whilst turning an ignorant cheek to these facts and plagues that coal is causing our health and our environment, or we can do what is right and strive for cleaner, healthier and more efficient energy. "What's right is not always popular and what's popular is not always right." It may hurt some in the present to rally against coal, but the end result will be one of a cleaner and healthier state that even the friends of coal can prosper from."*

**Division's Response to Comment 2l:**

The Division acknowledges the comment. Please see the Division's response to Comments 5, 8, and 10 in Attachment C.

**Comment 2m (Email #586):**

*"Please do not allow for another source of respiratory irritation and disease to be constricted."*

**Division's Response to Comment 2m:**

The Division acknowledges the comment.

**Comment 2n (Email #603):**

*"As a member of the Sierra Club here in the Commonwealth, I stand with other Kentuckians who value the importance of clean air for all our citizens."*

**Division's Response to Comment 2n:**

The Division acknowledges the comment.

**Comment 2o (Email #613):**

*"We have to find a better way and for your benefit a more efficient yet cheaper way to continue production."*

**Division's Response to Comment 2o:**

The Division acknowledges the comment. Please see the Division's response to Comment 5 in Attachment C.

**Comment 2p (Email #615):**

*"Kentucky health statistics are very high on the bad side. Lets not just add another source of pollution to our state and to my home, Central Kentucky."*

**Division's Response to Comment 2p:**

The Division acknowledges the comment.

**Comment 2q (Email #628):**

*"Coal pollution destroys enviroments so far away from the plants, people in rural areas don't realize it's happening."*

**Division's Response to Comment 2q:**

The Division acknowledges the comment.

**Comment 2r (Email #636):**

*"For the health and safety of my grandchildren please deny this permit request."*

**Division's Response to Comment 2r:**

The Division acknowledges the comment.

**Comment 2s (Email #638):**

*"Using fluidized bed technology to burn waste coal is not in the interest of Kentuckians."*

**Division's Response to Comment 2s:**

The Division acknowledges the comment.

**Comment 2t (Email #649):**

*"The electric companies advertise what a good deal we get in KY because our rates are low. Electricity is not cheap if it's killing you."*

**Division's Response to Comment 2t:**

The Division acknowledges the comment.

**Comment 2u (Email #657):**

*"Let's make KY a leader in the new, cleaner energy sources and let's make decisions that promote health for people, plants & animals, as well as for future-oriented economic growth."*

**Division's Response to Comment 2u:**

The Division acknowledges the comment. Please see the Division's response to Comment 5 in Attachment C.

**Comment 2v (Email #658):**

*"I live very near Clark County and I do not want my health endangered by soot from an outdated technology. We must move away from coal as a source of energy even here in Kentucky; the jobs created from this plant will not pay for the health care costs it will engender."*

**Division's Response to Comment 2v:**

The Division acknowledges the comment. Please see the Division's response to Comment 5 and 8 in Attachment C.

**Comment 2w (Email #662):**

*"Today's Louisville "Courier Journal" indicated that Louisville is required by federal law to reduce the pollutants in the air residents daily breathe. Surely, with this warning, you will see the danger of allowing this plant to be approved."*

**Division's Response to Comment 2w:**

The Division acknowledges the comment.

**Comment 2x (Email #663):**

*"Kentucky needs to forward on clean energy technology. Do not enable these fossil fuel junkies any longer. Stand up for our future. God will reward you for it."*

**Division's Response to Comment 2x:**

The Division acknowledges the comment. Please see the Division's response to Comment 5 in Attachment C.

**Comment 2y (Email #668):**

*"As a Lexington resident, I am concerned about the health implications of this proposed permit. EKPC can choose to use other currently available technologies that would produce energy and create jobs while protecting public health."*

**Division's Response to Comment 2y:**

The Division acknowledges the comment. Please see the Division's response to Comments 5 and 10 in Attachment C.

**Comment 2z (Email #684):**

*"As a Kentucky resident, i think that this issue is particularly relevant; Eastern Kentucky is one of the most polluted areas in the US due to coal plants and mines. Please, no more coal plants."*

**Division's Response to Comment 2z:**

The Division acknowledges the comment.

**Comment 2aa (Email #689):**

*"Please have the courage and foresight to do what is right for the people of Kentucky. We deserve better!"*

**Division's Response to Comment 2aa:**

The Division acknowledges the comment.

**Comment 2bb (Email #698):**

*"Other states east of Kentucky usually get the results of our coal-fired generators. Mercury is just one of the heavy air pollutants that comes from coal-fired furnaces and when it falls to the ground, it leaks into our watersheds and pollutes our streams. Once there, it becomes part of the food chain of aquatic life( invertebrates to fish)."*

**Division's Response to Comment 2bb:**

The Division acknowledges the comment. Please see the Division's response to Comment 9 in Attachment C.

**Comment 2cc (Email #718):**

*"Now we know where those deaths are coming from. Now we can prevent them. Its a matter of health."*

**Division's Response to Comment 2cc:**

The Division acknowledges the comment.

**Comment 2dd (Email #719):**

*"It is time to start admitting that coal is not a renewable resource. We need to put our time and money into renewable energy.  
Do not build this unneeded and dangerous power plant."*

**Division's Response to Comment 2dd:**

The Division acknowledges the comment. Please see the Division's response to Comment 5 in Attachment C.

**Comment 2ee (Email #723):**

*"We need to move Kentucky into a clean, healthy future."*

**Division's Response to Comment 2ee:**

The Division acknowledges the comment.

**Comment 2ff (Email #728):**

*"Unfortunately, many years of parenting have included the problem of asthma."*

**Division's Response to Comment 2ff:**

The Division acknowledges the comment.

**Comment 2gg (Email #735):**

*"I am asking you to do all within your power to get rid of pollutants in our air, water, and soil. They are all inter-related, affecting the entire population. The proposed Smith plant will make the pollution"*

**Division's Response to Comment 2gg:**

The Division acknowledges the comment.

**Comment 2hh (Email #736):**

*"We really have to get off the coal in this state and in this country. Its dirty and the means of mining it is devastating!"*

**Division's Response to Comment 2hh:**

The Division acknowledges the comment.

***The Division received 459 nearly identical emails, which state as following:***

**Comment 3 (Email #1-459):**

*"The East Kentucky Power Cooperative's (EKPC) proposal for a new coal plant is unacceptable for the health and safety of our land and people.*

*Please reject EKPC's request for a draft air permit at their Smith coal-burning power plant.*

*If the EKPC invested in an aggressive program of energy efficiency, weatherization, and renewable energies, EKPC could offset the energy that would be generated by the new plant and prevent the emission of pollutants that will only bring more harm to Kentuckians."*

**Division's Response to Comment 3:**

The Division acknowledges the comment. Please see the Division's response to Comments 5 and 10 in Attachment C.

***In addition to Comment 3 above, some of the 310 emails included additional comments, which are addressed individually below:***

**Comment 3a (Email #304):**

*"My husband and I support all of the above text concerning the Smith coal-burning power plant. Please do not allow this proposal to go forward."*

**Division's Response to Comment 3a:**

The Division acknowledges the comment.

**Comment 3b (Email #310):**

*"Although I live in Jefferson County, Kentucky, about 100 miles away from the proposed site of the plant, I am concerned about air quality all across the Commonwealth."*

**Division's Response to Comment 3b:**

The Division acknowledges the comment.

**Comment 3c (Email #327):**

*"Please reject East Kentucky Power Cooperative's request for a draft air permit at their Smith coal-burning power plant--for the health and safety of our land and people."*

**Division's Response to Comment 3c:**

The Division acknowledges the comment. Please see the Divisions response to Comment 1 in this attachment.

**Comment 3d (Email #328):**

*"I am deeply concerned about the proposed construction of a coal burning power plant near the Gorge. This is a unique resource for all of Kentucky as well as for adjacent states that have no similar natural areas.*

*I recognize that I have benefited from abundant, cheap power and do not wish to deny others access to affordable electricity. Certainly LG&E has contributed to the state's*

*environmental problems over the years. But at this point in time, I am opposed to new coal burning plants anywhere in the Commonwealth for two reasons:*

*1. Global warming: until there is confirmed technology to capture CO2 emissions, we should not build any new coal fired plants. We are destroying the ecosystem on which all of us depend.*

*2. Mountain top removal: until this technique is banned, and we know that the coal to be burned is not resulting in the destruction of our land and water, we should not increase the demand for coal. The mountains of Kentucky and West Virginia are being destroyed. To approve a new coal burning plant at this time feels to me like cannibalism.*

*I see on the EKPC website their 2008 RFP for renewable energy. Can't the demand for additional power be met in this way?*

*Thank you for considering my opinion."*

**Division's Response to Comment 3d:**

The Division acknowledges the comment. Please see the Division's response to Comments 5, 6, and 8 in Attachment C.

**Comment 3e (Email #348):**

*"To whom it may concern:*

*I firmly stand with the statements below. I believe we are destroying the future of our planet, but we are destroying the future of our grandchildren before that! If you love your children and their children, stop known polluters by insisting they GO GREEN as possible and it will pay off financially for them in the long run plus help save the human race!*

*The East Kentucky Power Cooperative's (EKPC) proposal for a new coal plant is unacceptable for the health and safety of our land and people. They want to poison us, slowly, over time; and make lots of easy money quickly because of energy demands .Easy money means more than the health of human beings; and it means more than hard earned money (by seeking new, clean ways for energy) that would be reaped ethically.*

*Please reject EKPC's request for a draft air permit at their Smith coal-burning power plant.*

*If the EKPC invested in an aggressive program of energy efficiency, weatherization, and renewable energies, EKPC could offset the energy that would be generated by the new plant and prevent the emission of pollutants that will only bring more harm to Kentuckians.*

*EKPC should start working in the solar panel industries, the wind mill industries - anything to produce electricity without dumping carbon dioxide and other very harmful pollutants into our atmosphere and our waters."*

**Division's Response to Comment 3e:**

The Division acknowledges the comment. Please see the Division's response to Comment 5 and 10 in Attachment C.

**Comment 3f (Email #356):**

*“NO NEW COAL PLANTS IN KENTUCKY! This is archaic thinking.”*

**Division’s Response to Comment 3f:**

The Division acknowledges the comment.

**Comment 3g (Email #362):**

*“As an eighth generation proud Kentuckian, who has been an active participant in civic as well as political endeavors throughout my lifetime, as were my ancestors before me, I beg and plead that we look to the future instead of the dependency on the energy resources of the past to benefit our great State. Surely my anyone can see the damage that carbon emmissions have brought not only to our state and nation; but the world. Why would we contemplate adding to the carbon polution that the vast majority of international scientist agree is destroying our beloved planet. It is time for our Kentucky to lead and to forgo the immediate gratification of the almighty dollar to devote our time energies, resources research and developement to promoting answers to cleaner forms of energy as well as REAL SOLUTIONS to the generational poverty that has been a result of our continued reliance on coal, which has never been a reliable solution to these problems. Instead it has isolated a people made them dependant on the ups and downs of an industry who continues to destroy their land, endanger their lives, keeps them uneducated and poor with no other opportunity to make a living. Until and when scientist can find a way to make a clean coal energy method(not even in the testing range at this time) is found then we SHOULD TAKE A BOLD BRAVE STAND AGAINST THIS BUILDING ANY NEW COAL PLANTS.....I am horrified that its even under consideration. Does no one care about our children's or grandchildren's future? Thank you for your consideration of my strongly held views in this matter.” C'Allen Chauvin*

**Division’s Response to Comment 3g:**

The Division acknowledges the comment. Please see the Division’s response to Comment 5 and 6 in Attachment C.

**Comment 3h (Email #366):**

*“Enough. No more coal-fired power plants. We DO have sun and wind here, you know.”*

**Division’s Response to Comment 3h:**

The Division acknowledges the comment.

**Comment 3i (Email #367):**

*“As a Clark County native, I am especially troubled by the possibilty of environmental damage to my home region. I hope that you will reject the permit for this plant.”*

**Division’s Response to Comment 3i:**

The Division acknowledges the comment.

**Comment 3j (Email #373):**

*“It is not worth the trade off of having more jobs and polluting our environment and jeopardizing the employee's health.”*

**Division’s Response to Comment 3j:**

The Division acknowledges the comment.

**Comment 3k (Email #385):**

*"I regularly see the downwind effects of coal-burning plants; people living there far more easily develop many types of illnesses, the children there have more difficulty in school than they should; the effects are poison and a blight on the land and community. These should not be allowed to continue, much less put in as a new disaster-in-waiting for the Red River Gorge area. I urge you to take all steps to prevent this from happening."*

**Division's Response to Comment 3k:**

The Division acknowledges the comment. Please see the Division's response to Comments 8 and 10 in Attachment C.

**Comment 3l (Email #387):**

*"The East Kentucky Power Cooperative's (EKPC) proposal for a new coal plant is unacceptable for the health and safety of our land and people."*

*In a time of economic upheaval and massive climate change, Kentucky could fight both problems by creating jobs in environment-friendly energy sources. Thank you for your time."*

**Division's Response to Comment 3l:**

The Division acknowledges the comment. Please see the Division's response to Comment 10 in Attachment C.

**Comment 3m (Email #388):**

*"As a Kentucky resident this is a huge concern for me! Our state is beautiful, a prime example being Red River Gorge, just a few miles from the proposed location."*

**Division's Response to Comment 3m:**

The Division acknowledges the comment.

**Comment 3n (Email #391):**

*"The East Kentucky Power Cooperative's (EKPC) proposal for a new coal plant is sad. Kentucky has a hard time keeping up with other states in almost all areas partly because they cannot seem to agree to any changes."*

**Division's Response to Comment 3n:**

The Division acknowledges the comment.

**Comment 3o (Email #392):**

*"I would like to see KY seek alternatives to Coal Powered Electrical generation. We are tied very heavily to the most polluting form of electrical generation available."*

*We do not need another generation of CO2 polluting plants that will continue to harm us and the next generation."*

*Please make investments in Natural Gas Plants and Energy conservation instead!  
We need to hedge our bets against climate change and the issues that are likely to arise once the full impact of our pollution is understood."*

**Division's Response to Comment 3o:**

The Division acknowledges the comment. Please see the Division's response to Comment 10 in Attachment C.

**Comment 4 (Email #915):**

***The Division received an email from Mr. Robert Ukeiley on January 10, 2010:***

*I write once again, on behalf of the approximately 10,000 members of the Sierra Club, KEF and KFTC in Kentucky, regarding the draft East Kentucky Power Cooperative J.K. Smith Title V/PSD air pollution permit.*

*As part of the public participation process, the Division for Air Quality has provided the public with a document entitled "Permit Application Summary Form." See Attached. The Permit Application Summary Form contains incorrect information. In fact, I suspect that this Permit Application Summary Form is actual for a permit other than the J.K. Smith draft permit currently under review.*

*For example, the Permit Application Summary Form states that the actual NOx emissions will be 80.14 tons per year (tpy). However, the J.K. Smith permits 1839.6 tons per year of NOx emission. (210 lb/hr \* 2 units \* 8760 hours per year / 2000 lb per ton). I am just using NOx as an example. I think that all of the emission values provided for actual emissions are wrong. That is why I suspect that this is actually the Permit Application Summary Form for a permit other than the J.K. Smith draft permit currently out for public comment.*

*As you know, air pollution permitting can be complicated for members of the general public. Many members of the public may rely on the Permit Application Summary Form rather than reading the 1100 pages of information available. Telling the public that the NOx emissions will be 80 tons when it will really be 1839 tons creates a dramatically different impression of the nature of this project and the need for a member of the public to get involved.*

*DAQ provided this inaccurate Permit Application Summary Form to Elizabeth Crowe of KEF in response to an Open Records Act request. This inaccurate Permit Application Summary Form is also currently available at the Clark County public library and on the DAQ web page. See [http://www.air.ky.gov/NR/rdonlyres/6D811C41-C97B-4911-98C1-C45C43926B0D/0/V0507R2Sum\\_22608.pdf](http://www.air.ky.gov/NR/rdonlyres/6D811C41-C97B-4911-98C1-C45C43926B0D/0/V0507R2Sum_22608.pdf)*

*In light of the above, I request:*

- 1) DAQ remove the inaccurate Permit Application Summary Form from its web page and the Clark County library as soon as possible.*
- 2) DAQ provide an accurate Permit Application Summary Form on its web page, at the Clark County library, and to me.*
- 3) DAQ re-start the public comment period with a new public notice once a correct Permit Application Summary Form is made available and the other issue I have previously mentioned is addressed.*

*I would appreciate a prompt reply as to what DAQ intends to do about this situation as well as a reply to my January 7, 2010 e-mail which is below. Finally, please consider this e-mail and the attached documents as a comment on the draft permit.*

**Division's Response:**

The Division does not concur. The Permit Application Summary Form contains accurate actual emissions from the J.K Smith facility. These values are the actual emissions reported by EKPC during the 2008 Kentucky Emissions Inventory Survey (KyEIS). The Division cannot provide actual emissions for equipment that has not been constructed. The Division has added a note to the referenced table explaining the basis for the actual emissions. Also, please see the Division's Response to Comment 1 in Appendix B, regarding additional emissions information added to the Permit Application Summary Form.